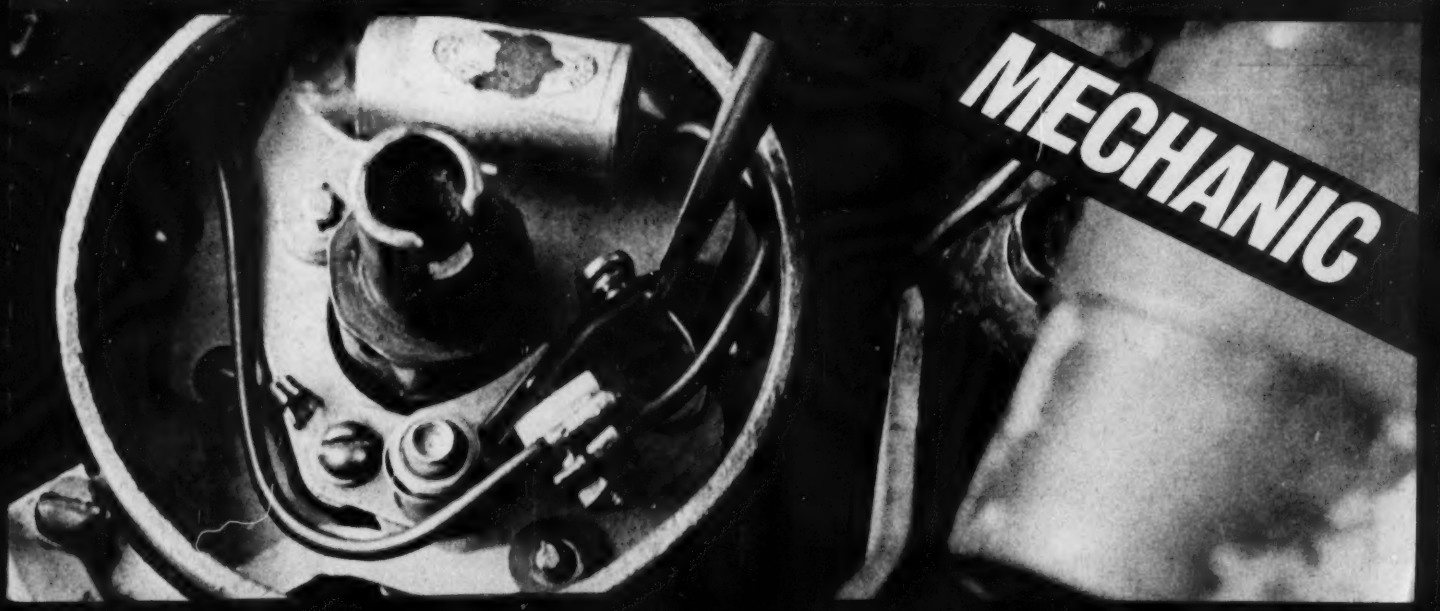
JULY 1974

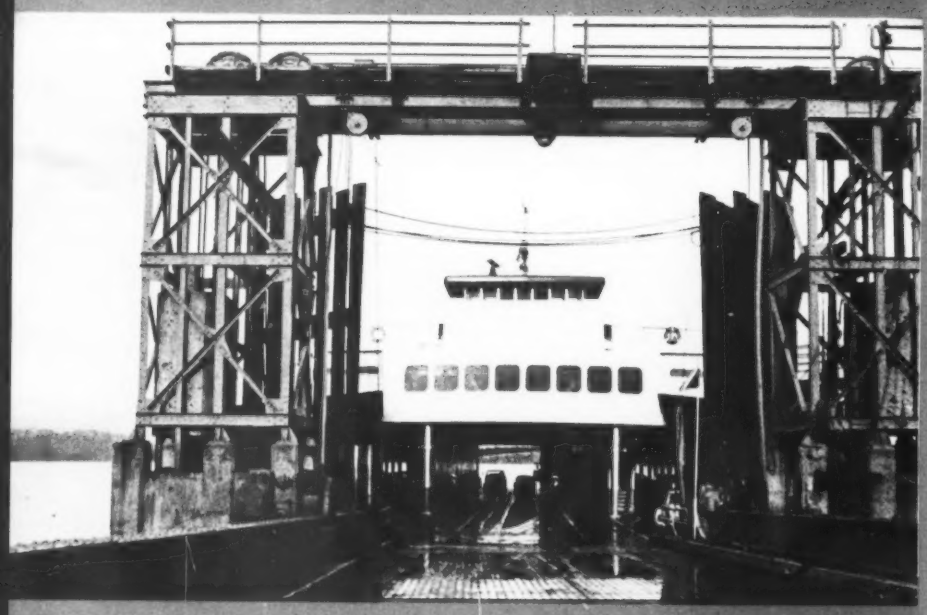
DRiVER

BOATING?

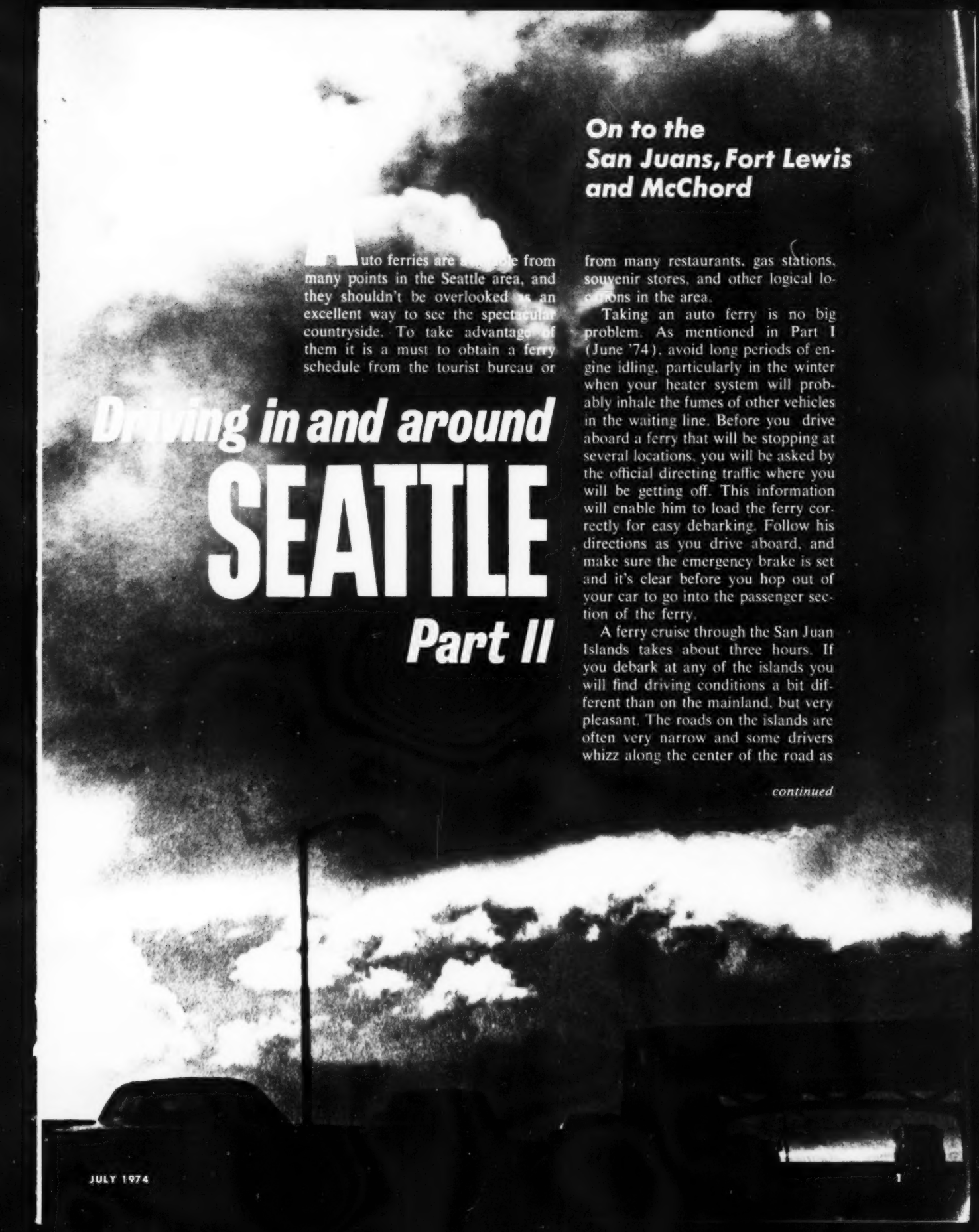
SEATTLE



MECHANIC



(left)
Driving isn't the only way
to see this area.
The excellent
Washington State ferries
provide a leisurely
and "different" way to
explore the Pacific Northwest.
Seattle has ferries
that go to Alaska and
Canada as well as
to points within Washington State.



Driving in and around SEATTLE

Part II

On to the San Juans, Fort Lewis and McChord

Auto ferries are available from many points in the Seattle area, and they shouldn't be overlooked as an excellent way to see the spectacular countryside. To take advantage of them it is a must to obtain a ferry schedule from the tourist bureau or from many restaurants, gas stations, souvenir stores, and other logical locations in the area.

Taking an auto ferry is no big problem. As mentioned in Part I (June '74), avoid long periods of engine idling, particularly in the winter when your heater system will probably inhale the fumes of other vehicles in the waiting line. Before you drive aboard a ferry that will be stopping at several locations, you will be asked by the official directing traffic where you will be getting off. This information will enable him to load the ferry correctly for easy debarking. Follow his directions as you drive aboard, and make sure the emergency brake is set and it's clear before you hop out of your car to go into the passenger section of the ferry.

A ferry cruise through the San Juan Islands takes about three hours. If you debark at any of the islands you will find driving conditions a bit different than on the mainland, but very pleasant. The roads on the islands are often very narrow and some drivers whizz along the center of the road as

continued

DRIVER

THE TRAFFIC SAFETY MAGAZINE FOR THE MILITARY DRIVER

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The DRIVER staff is sold on helmets. Partly because of personal experience and partly because we frequently talk with the people who really know the score about helmets—professional racers and exhibition riders, engineers, medical doctors, and highway patrolmen.

Doctors have described to us exactly what happens to the brain and spinal cord when a rider falls on his unprotected head. Design engineers have shown us how a helmet liner can absorb energy and protect the brain. Pro riders have told us about the crashes they've walked away from because of their helmets. And we've heard many policemen describe what they've seen in their years of arriving at accident scenes.

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NEXT MONTH

High Performance Economy

You can stop off at peaceful San Juan Island like this . . . Instead of taking your car aboard the ferry, why not a bicycle?

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You will also find things a bit different if you get off at Vancouver Island, British Columbia. Although a passport is not normally required, it is best to check with local authorities or, better yet, with U.S. Customs authorities before you leave the U.S. Identification rules, and regs regarding taking foreign-made goods (like Japanese cameras) in and out of a foreign country are subject to change.

Keep an eye on the traffic signals and signs as you drive in Victoria, the provincial capital. Traffic is fairly heavy, with lots of one-way streets, blinking signals and distracting attractions. It's easy to get into trouble if you don't give enough attention to your driving.

This extra attention to the road is especially important in the rain, as we found out on our return to the Seattle area on Highway 101 via Port Angeles. We drove through a portion of the spectacular Olympic Peninsula on our way to Fort Lewis. The climate that produces the rain forest this area is famous for can make driving treacherous, particularly when the sky is overcast, and after dark. It's an excellent idea to burn your headlights during bad weather conditions, since cars can become almost invisible in the dim light.

FORT LEWIS

Fort Lewis is one of the most impressive military installations we've seen, and it has an awful lot going for the serviceman, especially when it comes to driving and maintaining his car.

The 740,000-acre installation is primarily an infantry training center and headquarters the 9th Infantry Division. There are approximately 25,000 military and civilians on this post, and a lot of vehicles. As a result of the pay boost for the lower grades, the vehicle population has doubled in the last eight months. (You will probably see most of them if you happen to be on Post on payday.)

Fort Lewis has four gyms, a large lighted stadium for softball, a 36-hole golf course, a miniature golf course, a lake, an indoor swimming pool, four gas stations, two special services party boats, sailboats, 300 pairs of skiis to rent, a complete auto body shop, a fantastic Recreational Services Section, and a lot more.

The Post is located off Interstate 5 about 12 miles from Tacoma, and borders McChord Air Force Base. As you enter the main gate you will notice a picturesque fort-like information center where you can get directions and a map (see photo, page 5). Incoming personnel as well as visitors should check through here; and new assignees will be given directions to the "Welcome Lounge," a center for inprocessing.

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Private vehicles are not all you see at Fort Lewis. There are also tanks, mobile guns, and other special-purpose military vehicles around the maneuvering ranges. These vehicles and marching troops on the range roads make it even more important to stick to the Post speed limit to be able to slow down in time. Watch for signals from troop leaders wearing red fluorescent vests, and give the marching troops ample passing room.

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(left)
Debarking at Vancouver Island, British Columbia, means your first stop will be at Canadian Customs. It may be necessary to register foreign-made goods before leaving the U.S., to avoid paying duty on them when you re-enter the country.

(above and left)
Sights are nice in Victoria, British Columbia's provincial capital.

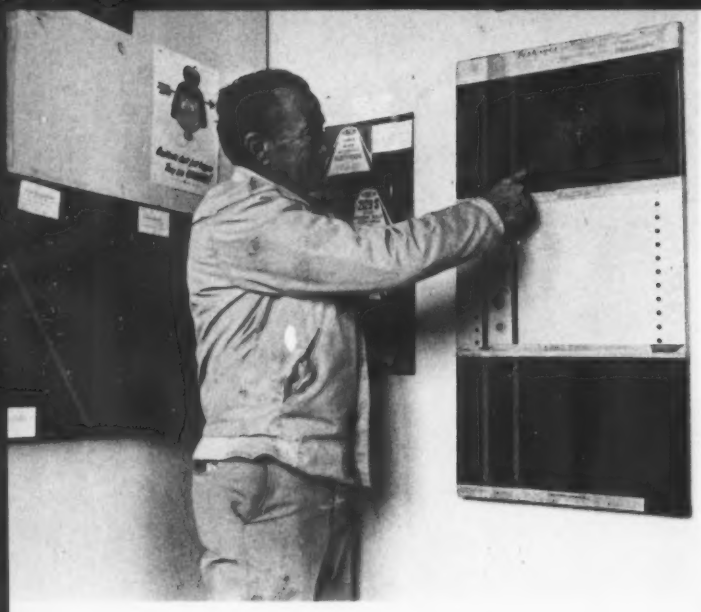
Log trucks are a common sight in the Pacific Northwest. Patience is required while waiting to pass.

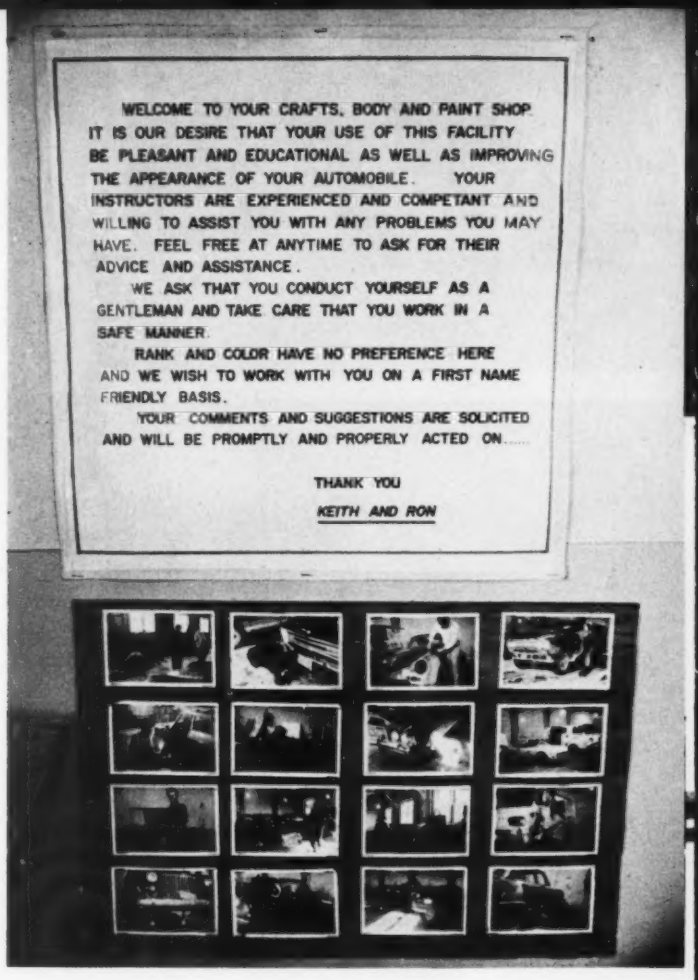
DRIVING IN AND AROUND SEATTLE

The information installation just inside the gate at Fort Lewis is not only picturesque but invaluable to the visitor or new arrival at one of the largest military installations in the world. This should be your first stop on Post.

(above)
Army training conducted at and around Ft. Lewis takes many forms, including survival training in a rain forest and adventure training in nearby mountains.

(left)
The photographer shifted the horizon in his eagerness to capture this shot of a sailboat competing in Fort Lewis' Cannon Cup Race. Various boats are available for rent on the American Lake, which lies partially on Fort Lewis property. (U.S. Army photo)




WELCOME TO YOUR CRAFTS, BODY AND PAINT SHOP.
IT IS OUR DESIRE THAT YOUR USE OF THIS FACILITY BE PLEASANT AND EDUCATIONAL AS WELL AS IMPROVING THE APPEARANCE OF YOUR AUTOMOBILE. YOUR INSTRUCTORS ARE EXPERIENCED AND COMPETANT AND WILLING TO ASSIST YOU WITH ANY PROBLEMS YOU MAY HAVE. FEEL FREE AT ANYTIME TO ASK FOR THEIR ADVICE AND ASSISTANCE.
WE ASK THAT YOU CONDUCT YOURSELF AS A GENTLEMAN AND TAKE CARE THAT YOU WORK IN A SAFE MANNER.
RANK AND COLOR HAVE NO PREFERENCE HERE AND WE WISH TO WORK WITH YOU ON A FIRST NAME FRIENDLY BASIS.
YOUR COMMENTS AND SUGGESTIONS ARE SOLICITED AND WILL BE PROMPTLY AND PROPERLY ACTED ON.....
THANK YOU
KEITH AND RON

(above and right)
The man to see for advice about body repair at Ft. Lewis is Keith Melendy, Supervisor of the Body and Paint Shop. Excellent instruction and displays showing stages of surface-prep, plus a first-class shop with all necessary equipment and tools make this a paradise for the do-it-yourselfer. The shop is open to all servicemen.

(above and left)
McChord's main business is airlift.

PASS INFORMATION PHONE NUMBERS

Mountain pass reports of road and slope conditions, plus chain requirements, are available 24 hours a day by dialing these numbers:

Ellensburg, 925-6151
Everett, 252-3146
Longview-Kelso, 636-2660
Olympia, 943-4600
Seattle, 464-6010
Spokane, 456-6333
Tacoma, FU 3-4541
Vancouver, Wash., 696-4381
Wenatchee, NO 3-5151
Yakima, CH 8-6982

Fig. 1

the winter. They are available free from the Post Safety Office, and are a must, especially when visibility is even further limited by the winter months of driving to and from work in darkness.

Not only is there a fine auto repair hobby shop on Post, but an excellent and complete body repair shop (see photo, page 6) as well. Expert instruction is available at these hobby shops, and they are open to members of other services on a space-available basis. So there's really no good reason not to keep your car in top shape, and have the side benefit of learning maintenance and body repair as well —something that can save you a bundle later on.

If you don't have a car at Fort Lewis you will still be able to get around, plus you will save a lot of money on insurance and other ownership expenses. There are two full-time Post shuttle buses which operate free of charge. In addition, all the major commercial buses stop on the Post and there is a regular run to and from "SEATAC," the large, nearby airport that serves both Seattle and Tacoma.

There are 3,300 sets of quarters on Post, plus housing available in nearby communities so the commuting problem is nil. Tacoma is 12 miles away; Lakewood adjoins the Post.

Many soldiers take advantage of the nearby ski slopes, of which there are 5 major ones to choose from. There is no need to take your car because the Post arranges bus service to the slopes, free ski instruction, and full equipment rental at special rates. If you do take your car, however, check the road condition of the passes before you depart by calling the appropriate number for a current recording that includes chain requirements (shown in Fig. 1). We were told that the place to buy chains is *not* on the way up the mountains unless you want to pay the highest price possible.

The Commanding General of Fort Lewis has lifted a requirement for soldiers to obtain special permission to participate in sanctioned racing. There are good facilities for weekend racing at the nearby town of Puyallup. For spectators, there is the Seattle International Raceway which offers a special rate for servicemen.

Boating is also a popular pastime in the Ft. Lewis area. However, a word of caution about off-post boating expeditions. Some fellows take dramamine to ward off seasickness, then drive home "under the influence." Dramamine can really degrade your ability to drive (especially after spending all day on the water), as can other drugs. So it's best in this situation to have a buddy drive, or at the very least, take advantage of the attractive rest stops on the return route.

McCHORD

Fort Lewis' next door neighbor is McChord Air Force Base, primarily a Military Airlift operation housing the 62d Military Airlift Wing. The base is located 10 miles south of Tacoma, in the shadow of 14,400 foot Mount Rainier. Like Fort Lewis, McChord shares the road with approximately 177,000 local drivers.

The people at the safety office told us that a driver coming into this area above all needs patience. The weather sometimes seems to change completely every half hour. Heavy winter rains make driving at a reduced speed a necessity, especially at night when the slick streets add to the glare of headlights and make it hard to see even the divider line.

Although there is little snow in the McChord area, when it does come schools close, detours are set up, and accidents happen. "Black Ice" is common in this area on shaded areas of macadam roads and looks just like water. If you have any doubts about an icy road's effect on your tire traction, local officials recommend testing it by a short hard application of the brake in a traffic-free location.

The 12,000-man base has good rapport with state and local police and the safety office told DRIVER that Washington State strictly enforces its traffic laws and that there are several that a newcomer or visitor may not be aware of.

If, for example, you are cited for insufficient tire tread depth at one of the periodic spot inspections, the cost is $25 per faulty tire. This is more reason than ever to run good tires on your car. If you drive with your arm around your girlfriend (or anyone else) you are apt to be ticketed for reckless driving. (Locals call it the "embracing law.") There is no minimum speed law, but, if in the opinion of the police you are impeding traffic, you will be cited. The car on the right has the right-of-way in an uncontrolled intersection, no matter which car enters the intersection first.

It's always a good idea when going to a new assignment, or visiting another state for any length of time, to pick up a driver's handbook and check out the traffic laws of the state. Talk to the locals at gas stations and find out what is different about driving in their area and what is required in the way of special equipment such as chains or snow tires. Then visit the tourist bureau for maps and brochures showing how to best explore the area. Couple this approach with sensible driving, and you've got it made with an assignment to the Pacific Northwest, or anywhere else.

Part IV

GETTING INTO IT

By now many of you have discovered that simply riding a motorcycle is really pretty easy and an awful lot of fun. But if you've been out in traffic, you've also discovered that street riding isn't exactly what you'd call easy. It takes plenty of riding skill and a cool head to handle the street scenes—like cars and intersections—that make life more challenging for the biker.

Well, we can't sit here and tell you if and when you're ready to go out and tangle with traffic, or how to do it for that matter. All we can really say (as we have in the past) is to know what you're doing on a bike before you hit the streets, and stick to low-traffic riding as much as possible at first. What we can do here, however, is offer some basic street-riding tips to help your transition into a smart and safe road rider.

The important thing about street riding is realizing that everything out there is a potential hazard. In addition to cars and intersections—your worst enemies—there are plenty of little things like railroad tracks, manhole covers, and slippery road surfaces to give you trouble. We won't talk too much about unusual riding conditions until next month. But until you get a good feel for the street you should be taking it easy and treating these conditions with extra caution.

Another important aspect of street riding you should work on in the first few weeks is developing a street sense. The whole game is protecting yourself from cars and hazards on the road by anticipating and recognizing problems. If you don't notice things like exhaust from a parked car or the front wheels turning toward the street indicating the car may be pulling out, you're living dangerously.

We've also talked about the value of protective equipment. But any way you cut it, your chances of avoiding an accident are a whole lot better than escaping undamaged from one—even if you're wearing the best protective gear. So work on recognizing problems on the road and get into observing how drivers act and react. And finally, don't get overconfident when you get through those first few weeks. Remember that you can get it at any time on the street. But if you're a smart and observant rider you should *never* get it.

VISIBILITY

One of the first things a smart street rider concerns himself with is trying to make other motorists see him on the road—and watching out for those who don't. In our previous articles we discussed methods of making you and your bike more visible on the road. These practices include burning your headlight at all times and using bright, reflective riding clothes.

Doing everything you can to up your visibility on the road is smart. But don't make the mistake of thinking that just because you have your headlight on and you're wearing a bright jacket that no one is going to turn or pull out in front of you. It's absolutely essential that you ride as if you're invisible at all times. Never assume a driver has seen you even if he looks right at you.

Along with trying to get other motorists to see you, you've got to communicate with them. Many people can't or don't judge the speed, location, or closing rate of a motorcycle because of its unfamiliar size. So you have to be sure and let "Joe Average" motorist know what you're doing by flashing your brake light when slowing and signalling early for turns. Most newer bikes have electric turn signal lights—use them but don't for-

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get to shut them off after you complete the turn. It's also not a bad idea to use conventional hand signals along with the electric turn signals when possible.

At night you can have a problem with oncoming motorists thinking you're a car with one headlight. One trick is to meander slightly within your lane to let the driver know you're not a car—if nothing else at least he should notice you. Another item to consider is a commercially-available wiring hookup that allows the rear turn signals to come on with the brake light, yet still function as turn signals. The additional light sends out a much better message that you are slowing—especially at night.

TRAFFIC LAWS

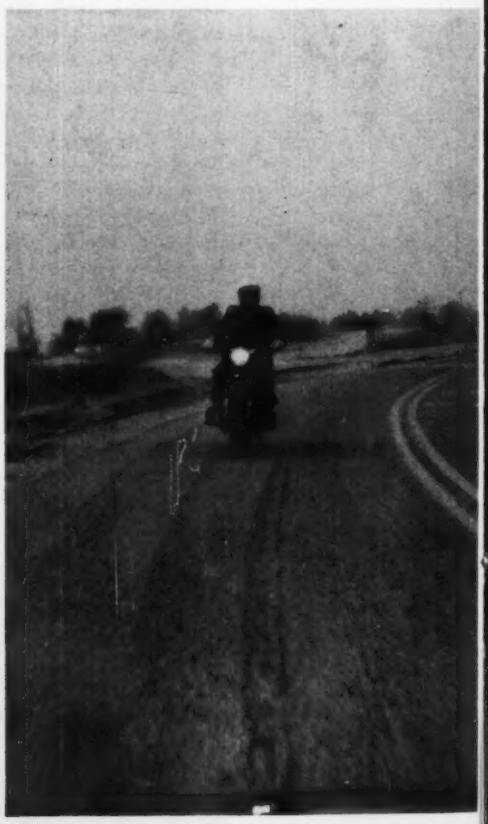
Except for a few special laws and provisions, motorcycles generally fall under the traffic laws and codes that govern all vehicles. So one of the easiest ways to avoid any kind of trouble on the road is to know the traffic laws and abide by them. By riding sensibly and within the law you can also make riding safer for all of us by helping to change the negative attitude many drivers have toward motorcycles.

LANE POSITION

Probably the single most important factor on the road is maintaining proper lane position. You should avoid the super-slick center of the lane where cars drop oil by riding the outside or left part of the lane—approximately where the left wheels of a car track. But stay away from the painted center line—it's slippery when dry and treacherous when wet.

Along with avoiding the oil there are a bunch of good reasons for "riding the stripe" as it's called. First, in order to pass, other vehicles have to swing all the way out into the passing lane to get by—this prevents the old squeeze-you-out routine. Another important aspect is that by riding the outside of the lane you are more visible to oncoming traffic. Finally, as long as you can see yourself in the outside mirror of the car you're following you know you're not in his blind spot.

One exception to the stripe rule is



when you're riding in the fast lane of a freeway. In this case it's usually best to switch to the right-hand portion of the lane to prevent someone from squeezing you across the center line into oncoming traffic.

A very questionable practice is riding between traffic lanes, or "splitting lanes" as it's called. While not illegal in all states, it's dangerous everywhere. If you must split lanes go very slowly and be prepared for people changing lanes. Also look out for opening car doors when traffic is halted.

DISTANCE

Surrounding yourself with plenty of air on the road is another important thing to keep in mind. There's a continual debate about how fast a motorcycle stops in comparison to a car, but this is pretty much unimportant. What is really important is making sure you have plenty of space to get your bike pulled down in an emergency. Also, that there's enough room for the guy following you to stop without making a hood ornament out of you. This is especially important on a motorcycle because you can be pretty darn sure that the guy behind would rather plow you than swerve into the oncoming traffic lane and tangle with something more his size.

A good way to judge your following distance is the two-second rule. What the two-second rule is all about is that when the car you're following passes a fixed object like a traffic sign you count off two seconds. If you get to the same object before you finish counting, you're following too closely. The beauty of this rule is that it works at any speed. So keep your distance, but don't leave too big a gap or someone will squeeze in and squeeze you out.

Also be sure to check your mirror regularly to make sure you're not being tailed too closely. If you've got a car breathing down your neck, don't play games—just let the guy pass even if it means pulling over or off the road to let him by.

One other point is to avoid following large vehicles like semi-trailer trucks when possible. Large vehicles tend to hide you to oncoming traffic which often results in a car trying to make a quick left turn right behind the truck just about the time you get there. So if you have to follow a truck, double your normal following distance and ride near the center line. Also be cautious of open trucks hauling loads—some debris dropped on the road that doesn't mean anything to a car, may be enough to dump you or send you in the ditch trying to miss the junk.

SCANNING

Of course you want to constantly check your mirrors and keep your eyes moving when riding. You have to take in a lot more when riding a motorcycle than if you're driving a car. You have to constantly look for potential hazards like changing road conditions and traffic situations. One of the greatest parts of road riding is the terrific view of the world you get. But never fix your eyes on anything when riding because you have a tendency to follow your eyes and very little change in steering input makes a big difference on a bike. So if you're

continued

really groovin' on some bit of scenery it's better to pull off to check it out than to find yourself getting closer to the scenery via the ditch.

INTERSECTIONS

Intersections are where the greatest number of bikers get nailed. So you should never forget that every intersection has a very great disaster potential. The only way to approach an intersection—even with the right-of-way—is very slowly and carefully. You should always be prepared to stop or take evasive action at an intersection.

While every intersection is bad, there are some situations that offer worse possibilities than the others. Blind intersections are obviously hazardous and should be approached very carefully. Light-controlled intersections can also be troublesome—never jump the light and be absolutely sure everything is clear before proceeding.

The leading motorcycle/car accident situation is a car making a left turn in front of a motorcycle—be extremely cautious of this situation. Also in states that permit a right turn on a red light be careful of people making a quick right after a rolling stop and only a quick glance to the left.

When pulling up to a traffic light be sure to stay to the left of the lane. Otherwise the guy who doesn't want you splitting traffic lanes on the freeway may think it's just fine for him to share your lane at the light.

Anytime you're riding in city traffic you have to be on the lookout for pedestrians stepping out from behind cars. You should also avoid riding along a row of parked cars unless you want to get a car door zapped in your face. And, as previously mentioned, keep your eyes on the brake lights and front wheels of parked cars to make sure they're not going to pull out in front of you.

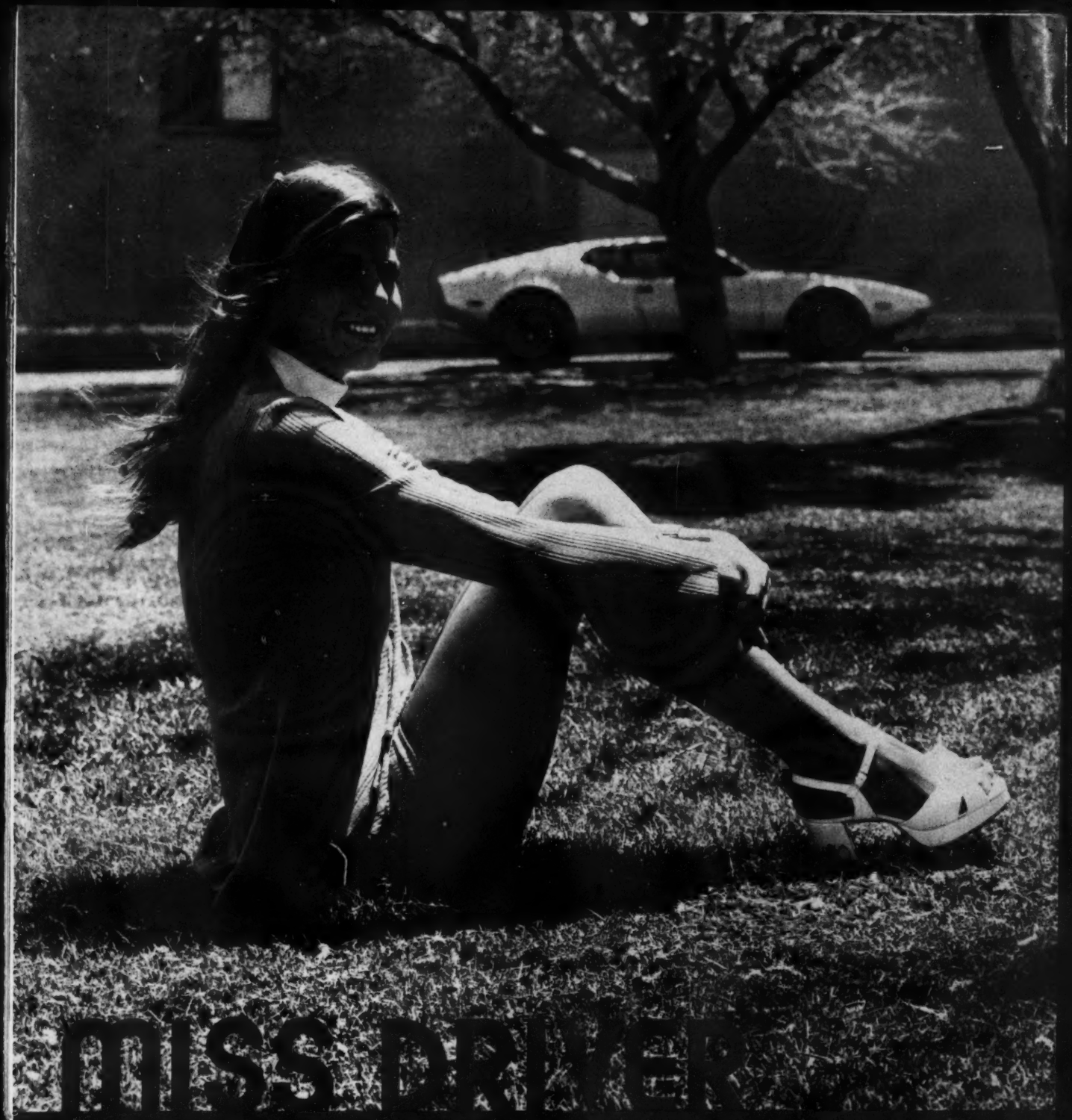
A super-hazard a lot of new riders overlook is the driveway in residential areas. Since people generally back out of their driveway, their visibility is more limited than normal. This, coupled with the fact that a person may be in a hurry—like in the morning going to work—makes for a potential problem if you're not careful. And don't count on just swerving around the guy if he doesn't stop—you'd better be prepared to stop since a lot of people use the entire street to back out of their drive.

COMMON SENSE

A couple of other points to keep in mind when riding on the road are to always ride at reasonable speeds and to slow before entering curves. This way you can check out the corner and then turn the wick back up if you want to get it on through the corner. This is the safest and fastest way through.

Railroad tracks, holes, bumps, and other such irregularities in the road surface present some problems which we'll talk about next month. But essentially all you have to do is slow down, make your moves gradually, and go directly over road obstructions at a right angle.

But really the most important thing with street riding—besides knowing what you're doing on a bike—is just using common sense. If you ride sensibly, keep your head, and know what's happening on the road all the time, everything should be cool.



MISS DRIVER

"Some people are so serious about conserving gasoline that they've fallen into bad driving habits, such as 'running the yellow' at stop lights to avoid that gas-burning stop, idle, start-up routine. 'Yellow runners' all too soon grow bold and become real red-light runners. Two tips:

- If the light turns yellow after you enter an intersection, accelerate to pass through as quickly as possible.
- If you are stopped at a light, don't move into the intersection as soon as you get the green — check both ways for the light runners first."

MARJORIE STEVENS

A little study and preparation will make it a lot more fun

anyone fo

Maybe boating, like motorcycling, isn't everybody's bag. But the enormous increase in the sale of all kinds of boats and the rapid development of marinas and similar facilities can only mean that people are taking to the water as never before. If you think there will never be a thrill to equal getting your first car, just wait until the day you step onto your own boat!

But maybe you aren't planning to be a boat owner at all—perhaps you've just got your mind on renting a houseboat for a week or borrowing a friend's outboard to do a little water skiing. No matter. Boating is like everything else—the fun you get out of it will depend a lot on how carefully you prepare. And the more knowledge you have before you leave the dock, the less likely you are to see your summer pleasure turn into a disaster.

LEAN ON THE COAST GUARD

If you're new to the boating world, the best way to find out what it's all about is through the United States Coast Guard. Check your telephone book or your local library for the address of your nearest Coast Guard District office. The Coast Guard Auxiliary offers free courses nation-wide and will help you get started right by teaching you basic navigation, chart reading, marine engines, weather, terminology and much more.

This comprehensive course usually lasts 12 weeks with one 2-hour class each week, and leads to a "Basic Seamanship Certificate." If you don't have time for a 12-week course, there is the compact Safe Boating Course, particularly useful to the busy new boatowner. This class is usually presented over a 3-week period, but you may find that the Auxiliary flotilla in your area is presenting it all in one week, or even one day.

If your big love is sail boating, you will find a seven-lesson course covering sailing terminology, principles of sailing, basic sailboat handling, lines and knots, and how to handle emergencies.

The Coast Guard even has a one-lesson course (2 hours) especially for hunters and fishermen.

By all means take advantage of one of these courses if you possibly can. Also avail yourself of the Coast Guard's free literature, and have a qualified member of the Coast Guard Auxiliary examine your boat for safety requirements after you complete your "make-ready" maintenance. It's free and there's no obligation. What's more, no report is made to any law enforcement authority. The examiner will simply advise you of any deficiencies so you can correct them.

The Coast Guard also has boating safety films which you may borrow.

TRAFFIC RULES

There are rules for boating traffic just as there are for cars. But since you don't need a license to operate a pleasure boat, it may be tempting to postpone learning the marine traffic regula-

(left)
Pulling two skiers at once means just half as many starts and stops and that means you will save fuel. Use an observer, and be sure your skiers know and use the recognized hand signals.

Scuba diving can be a fascinating hobby, but it should be learned from a qualified instructor in a swimming pool and not from friends in open water.

tions—called the rules of the road.

Rules of the Road cover more than 100 pages in the Coast Guard book, but only a few concern the daytime pleasure skipper.

The basic fact you should understand is the concept of the *privileged* boat and the *burdened* boat. The privileged boat is the one that has the right of way and she must, by law, hold her course and speed. The burdened boat does not have the right of way and must stay clear—by slowing, stopping or going astern of the privileged boat.

continued

FLOAT PLAN

of _____ _____
Name and address of boat operator — Phone number

Search for an overdue boat has a much greater chance of being successful if the Coast Guard or other rescue agencies have certain facts. For your own safety and before leaving on a cruise, complete this form and leave it with a reliable person who will notify authorities if necessary.

IF OVERDUE, CONTACT _____
Name and phone number of rescue agency near point of departure.

VESSEL Name_____ CF_____ Length_____ Type/Style_____

Power_____ Rig_____ Hull Color_____ Range_____ Speed_____
Inboard — Outboard (if sail)

PERSONS _____ RADIO_____
Number aboard Frequencies

DEPARTURE FROM_____ Date/Time Depart_____

DESTINATION_____ Stops Enroute_____ Date/Time Return_____

IMPORTANT: DON'T FORGET TO CANCEL FLOAT PLAN WHEN YOU RETURN

State of California, the Resources Agency
DEPARTMENT OF NAVIGATION AND OCEAN DEVELOPMENT, Sacramento, California 95814

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Fig. 1 (left)
One of the most important safety devices is one you leave behind on land. If you fill out a Float Plan, the Coast Guard will know where to look for you when alerted that you are overdue.

How do you tell who is privileged? There are four types of vessels that are automatically privileged because they are less maneuverable than motorboats.

1. All unpowered craft—rowboats, kayaks, canoes. If you must pass close to one of these, remember you are also responsible for your wash, so slow down.

2. The commercial fisherman with nets down always has the right of way. The law requires these vessels to hoist a basket into the rigging as a signal that nets are down. (Steer well clear so you don't tangle a prop in a net—a mighty expensive blunder. This category does not cover fishermen who are trolling; the law considers them maneuverable.)

3. Also always privileged are sailboats, except when sail is passing power. Any overtaking vessel is burdened, even a sail boat.

4. Commonsense makes the big commercial ships privileged. The law says small craft may not hinder ship movement in narrow channels. But it's foolhardy for anybody ever to hassle a vessel that takes a mile to make a right angle turn and 4 to 6 miles for a panic stop.

No vessel has any rights pulling out of her slip. She must wait until the way is clear. The same would be true of a boat launching off a trailer.

So far as right-of-way is concerned between pleasure boats other than those listed above, it is pretty much a matter of position. If you think of the bow of your vessel as 12 o'clock, then every boat coming at you from 12 to 4 o'clock and close enough to present a collision hazard is privileged. For those from 4 o'clock all the way around to 12, you are privileged.

Here is where traffic on the water differs vastly from traffic on the highway. The privileged boat *must* maintain course and speed. No polite, slowing, defensive driving on the water such as we would recommend on the road. If you think about it, it's all very sensible. Only if the privileged boat maintains course and speed can the burdened vessel determine how to react and maneuver.

When boats meet head-on, or nearly so, both are burdened and both give way to the right.

CHECKLISTS, PRESERVERS, AND EXTINGUISHERS

Preparing your boat for the water is a detailed job and calls for a checklist. Near the top of the list should be a check for life preservers. Every person aboard must have one and it should be worn whenever the going is rough. Only one certain type of life preserver is designed to keep your head above water (and prevent drowning) should you lose consciousness. When you buy or wear preservers, make sure you understand what protection they are designed to give. (The law specifically calls for one approved life preserver or ring buoy for each person aboard vessels 40 to 65 feet. In smaller boats, buoyant vests or cushions are acceptable, one per person.)

Youngsters and nonswimmers should wear their preservers at all times except when sleeping below deck in boats with cabins. If life preservers are not in use, they should be stored where they can be reached in a hurry.

When boating in waters where a deep swell is running, such as the ocean or ocean bays, it is essential to carry a flotation collar with a pole and marker pennant attached. When correctly displayed, this device enables rescuers to sight an individual who has fallen overboard, despite the swells. Chances for rescue in a heavy sea without this marker are very poor.

Another vital item aboard any boat is the fire extinguisher. The size of the boat determines the number required. Extinguishers should be properly charged and strategically located in critical fire areas, such as near the engine and galley. Show all aboard how to break the seal and operate the extinguisher.

FLARES, BAILING DEVICES, COMPASSES

If you are unlucky enough to have engine failure in your power boat, you will probably require assistance. Coast Guard patrol boats are constantly on the lookout in major boating areas, and will lend a hand if they know you need it. Flares are a must for signalling, particularly if you are caught out after dark. Keep a good supply in a dry location such as the tool kit, where you should also have a flashlight and a foghorn.

Never assume you won't need bailing equipment. Weather conditions on the water change fast and the finest summer's day can end up with a storm that would tax Noah's Ark. Bailing equipment can be worth its weight in gold when your small craft starts taking on water. It's also good to have a bilge pump or bailing equipment ready to deal with leaks below the waterline as a result of damage.

A boat compass is the most important navigation device aboard a boat. This delicate instrument requires periodic calibration, known as "swinging the compass." This should be accomplished by a licensed marine instrument repairman.

LOADING THE BOAT

A boat's stability is affected by the moving about of people on board. For safety, there are several things you should remember when loading: Distribute the load evenly. Keep the load low. Don't overload. Don't allow standing up in a small boat.

Most boat manufacturers display a plate on their boats showing recom-

Boating safety rules aren't just for the big guys. Skill and knowledge are required, even for canoes.

Fire is a serious danger. In larger vessels, keep doors, hatches, and ports closed while fueling, galley fire and pilot lights extinguished. The filling nozzle should be kept in contact with the fill pipe to prevent static electricity, as shown here.

Sailboats are privileged vessels for the most part, but not when passing another boat, nor around commercial ships in a narrow channel or commercial fishermen with nets down.

mended weight capacity, usually in number of persons as well as number of pounds for persons, motor, fuel and gear. These are only recommended values for fair weather and don't relieve you of responsibility for exercising judgment. For instance, if the water is rough the number of persons carried should be reduced.

TRAILERS

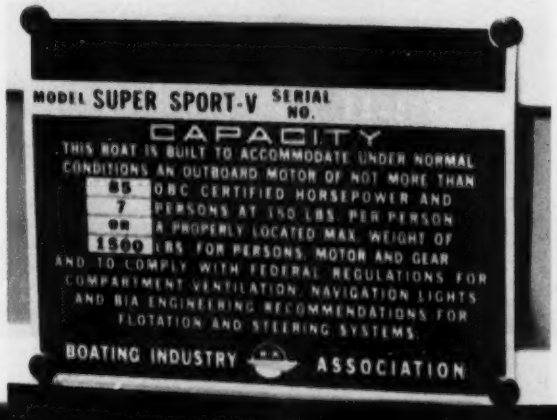
If you carry your boat on a trailer from home to the water and back, as so many boaters do these days, then proper maintenance of your trailer is important, too. Old hands say the wheel bearings should be repacked at least twice a year, especially if you launch in salt water. If your trailer doesn't have waterproofed wheel bearing assemblies, you should look into changing to this type. The winch and launch line should be in top condition, and if you use a power winch it should be rigged for hand operation in case of battery failure.

The boat rollers should be oiled and properly adjusted to fit the hull, and the tiedowns should be long and strong. Hitches should be checked frequently. Load-equalizer hitches are recommended.

Proper inflation of trailer tires is important if you don't want your trailer swinging and swaying. And be sure trailer lights, brakes, and registration meet the requirements of the states in which you expect to travel.

CAPSULE COMMENT

Perhaps the best advice about boating isn't much different from that for motoring and cycling: Have both yourself and the craft in the best possible condition. Plan your route, using maps and charts. Anticipate emergency situations and know in advance how to handle them. Do it this way and the biggest problem you'll have this summer probably will be your sunburn.


MODEL SUPER SPORT-V SERIAL NO.
CAPACITY
THIS BOAT IS BUILT TO ACCOMMODATE UNDER NORMAL CONDITIONS AN OUTBOARD MOTOR OF NOT MORE THAN
85 OBC CERTIFIED HORSEPOWER AND
7 PERSONS AT 150 LBS. PER PERSON
OR A PROPERLY LOCATED MAX. WEIGHT OF
1500 LBS. FOR PERSONS, MOTOR AND GEAR
AND TO COMPLY WITH FEDERAL REGULATIONS FOR COMPARTMENT VENTILATION, NAVIGATION LIGHTS AND BIA ENGINEERING RECOMMENDATIONS FOR FLOTATION AND STEERING SYSTEMS.
BOATING INDUSTRY ASSOCIATION

Most boats have a plate showing recommended weight capacity, usually in number of persons as well as number of pounds for persons, motor, fuel and gear. This is only a guideline. Exercise judgment on the side of caution.

Behind the Handlebars -- Part II

ENEMIES

A motorcycle series by Larry Johnson

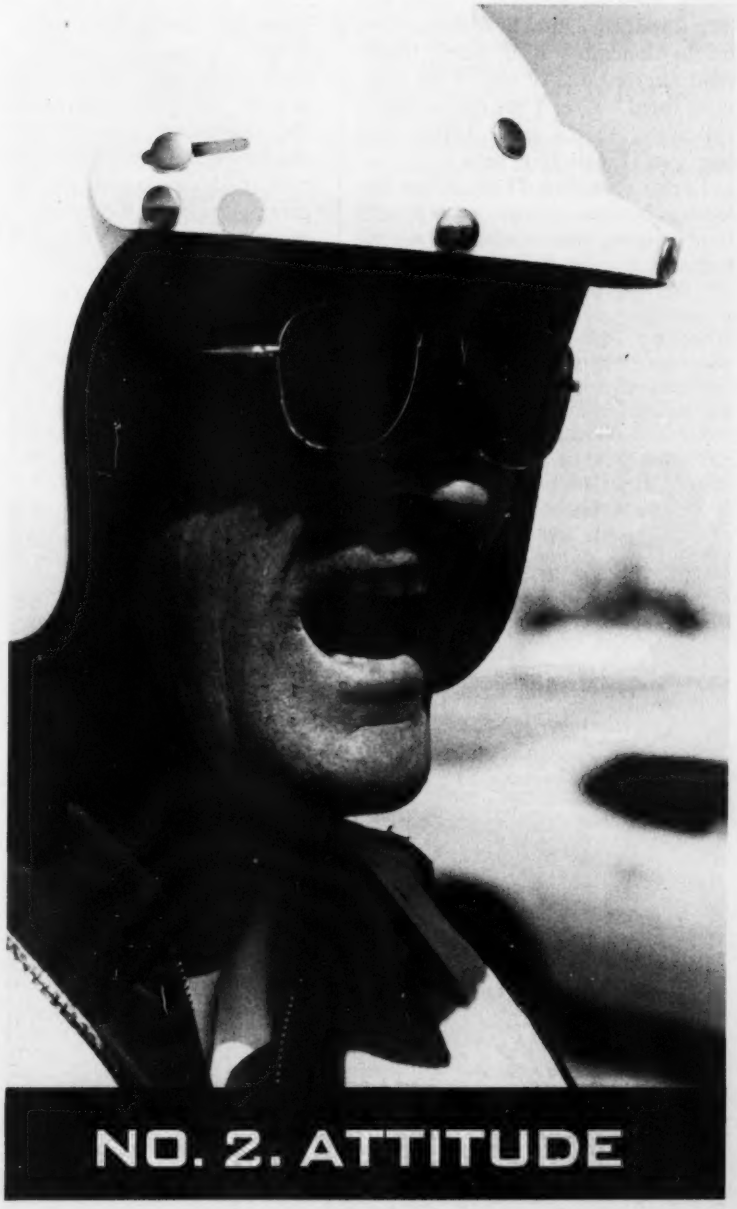
A motorcyclist has three basic enemies. They are in order mind benders, the motorcyclist himself, and fender benders. We'll try to discuss them separately but really they tie together somewhat and they all add up to only one thing—trouble with a capital T and that rhymes with C for cycle.

Let's start with the mind benders. Drugs are a bad trip even lying flat on your back so I shouldn't have to go any further—or should I? There are some drugs that you can buy legally over the counter, cold medicines for instance, which have subtle side effects. I have a buddy that walks like he's on the side of a hill on just one of those 12-hour tiny-time-pill capsules. His nose doesn't run but he's funnier than Red Skelton with a two-inch lift under one shoe. Cough medicines, too, frequently contain drugs or alcohol which can disturb your balance capability. The important thing is don't try to judge for yourself, because taking any drug auomatically disqualifies you. Get straight talk from a man who is best qualified—a medic.

How about alcohol—well, if drinking and driving cars don't mix, drinking and driving a cycle are an even worse scene. I recently saw a report on a guy who spent the best part of an evening enjoying the companionship of friends, such companionship being made all the more companionable by liberal draughts from the keg. Upon finding it late he decided to wind his way home on his cycle—but carefully man, ver-r-ry carefully.

NO. 1. MIND BENDERS

Larry Johnson began his riding career back in 1948 with a Cushman motor scooter. He soon moved on to a Mustang Motorcycle, a '48 Harley, then a '62 Harley. Currently he owns a '58 Cushman Eagle and a Honda CB 350. Larry is a Navy officer stationed at Norfolk. In addition to motorcycling, he enjoys flying with the Norfolk Navy Flying Club. He presently holds a commercial certifjcate with instrument and multi-engine ratings. DRIVER considers him well-qualified to give advice to new riders; the views expressed in these columns are strictly Larry's own.



NO. 2. ATTITUDE

Like you never saw such law-abiding driving.

Except that while waiting for a traffic light to turn green at an intersection he fell asleep and toppled over—*standing still.*

Alcohol affects higher functions first—judgment for instance: Judgment of your own ability, judgment of distance, judgment of time and speed. One drink is enough to disqualify you as a judge of your own condition, particularly since alcohol also promotes a *false* sense of well being. After judgment, alcohol affects the senses—vision and balance particularly. Three drinks narrow your vision angle. But we argue that motorcyclists have better all-around visual capability than drivers. Three drinks and you're no better off than a guy in a car. Now balance—three drinks is enough to screw up your balance. And then you're going to ride a bike—no way! That bike won't stand up by itself. It needs you to balance and with three drinks you might as well get your buddies to put on training wheels for you. And we have been taking quantities of booze that will not even produce the 0.10% BAC needed for a DWI conviction. This info is documented—think about it.

Enemy number two is you. Spelled out simply, I mean attitude. And on a motorcycle you are allowed only one attitude and that is cool, calculating respect for every other machine on the road, tempered with liberal amounts of courtesy. You are not al-

continued

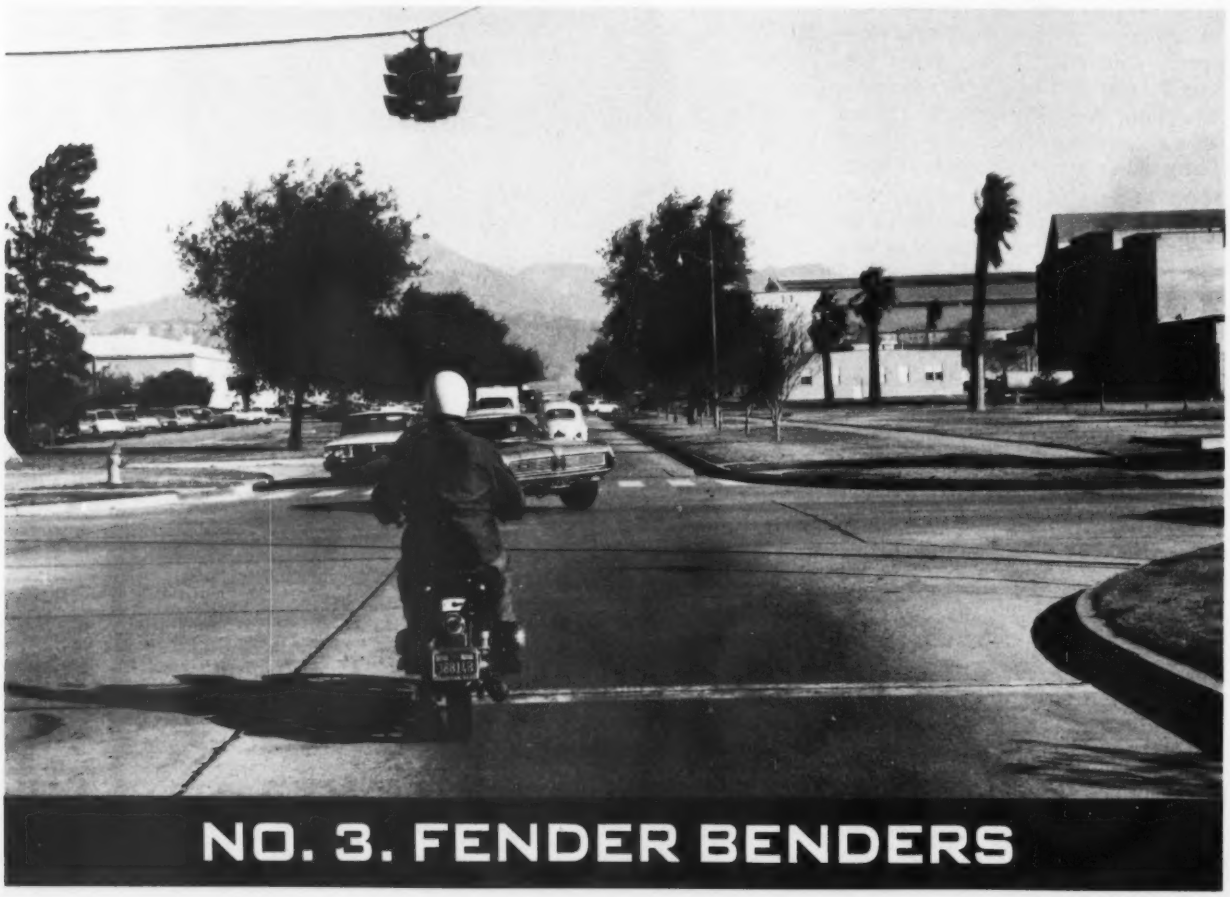
lowed pride, fear, anger, revenge, hate, or complacency. These will interfere with your traffic scan, they will dull your awareness of the situation around you, they will shorten your foresight of the situations developing ahead of you. They will get you into trouble faster than if somebody instantly painted your faceshield black. Think back to sometime when you were suddenly in a tight spot and then try to remember if it didn't follow right after a burst of one of the emotions listed above. Your own memory will illustrate my point better than any yarn I can spin here.

Enemy Number Three is/are the fender benders—those people with four or more wheels who believe the road is their personal domain. They come in all sizes and shapes and the only way to avoid them is through the continual practice of defensive driving and great gobs of courtesy. There are some who are deathly afraid of you, some who hate you like Cain hated Abel, and some who don't know that you exist because their minds are ten thousand miles away. You must ride your bike like everyone of them is totally incompetent. Happily enough, you will also meet people who practice defensive driving in their cars. That's a pleasure.

If I had to boil down the best means to combat Enemy Number Three into two words I'd say "GIVE WAY." I had a situation about a week ago where a woman was trying to edge into traffic from a side street. She had the front of her car halfway out into the traffic lane and as I was coming along she was giving me daggers expecting me to dance my bike around her front bumper and keep going. Instead, I stopped, gave her the brilliant Pepsodent smile and the "Alphonse and Gaston" routine complete with mock bow and courtly gestures. Her glare changed to surprise, the car bucked forward and stalled right in the middle of the intersection blocking all traffic. She got so busy trying to start it that she flooded it. So we all (me, she and two lanes of traffic) sat there patiently waiting while she ran the battery almost to parade rest and finally got started. When she had cleared and gone I eased into first and tooled on my way. See, courtesy does pay. It's even entertaining.

Back on track—remember your three enemies, face up to them, respect them for their potential to shorten your days in this vale of tears. The moment you neglect or ignore them may be your last. As the aviators say, "That can be a non habit-forming vice."

Be cool ☮



NO. 3. FENDER BENDERS

continued from page 2

DOUBLE CLUTCH

But we are even more enthusiastic about personal freedom than we are about helmets. So this question of constitutionality has been on our minds, and we thought you might have wondered about it, too.

The following explanation of helmet laws is from Lawrence R. Schneider, Chief Counsel of the National Highway Safety Administration:

The constitutionality of such laws must be determined primarily under the due process clause of the 14th Amendment. This clause does not bar all governmental measures that incidentally affect or restrict personal liberty. It bars only those measures that are arbitrary and unreasonable in that **they limit liberty without promoting the public interest**—that is, public health, safety, morals, and welfare.

The States have passed many public interest measures. There are anti-jaywalking laws; laws requiring workers to use safety equipment as a condition to receiving workmen's compensation; compulsory vaccination laws; laws requiring hunters to wear red jackets; and laws requiring boat owners to carry life preservers. You can think of many more.

There have been numerous court decisions upholding helmet-use laws and the courts have said something like this:

Even though a major effect of helmet-use laws is to protect the helmet user, helmet use by a motorcycle operator **promotes public safety** by helping a motorcycle operator keep from losing control and **endangering other highway users** when his head is struck by debris thrown up by other vehicles or struck by flying insects, etc.

Secondly, helmet use by motorcycle operators and passengers **promotes public welfare** by reducing highway deaths and injuries and therefore **reducing public expenditures,** such as unemployment compensation and welfare payments.

SEAT BELTS, TOO

Since Australia passed a mandatory seat belt law in 1972 and cut deaths by 20 per cent, there has been growing pressure for such a law in this country. No doubt the courts would apply the same reasoning that they have applied to helmet laws. Although a major effect of the law would be to protect the user, so long as the law also protects the public interest, it would be constitutional. And since the public welfare benefits of belt-use laws would far exceed those of helmet-use laws (experts predict 15,000 lives a year would be saved) the argument would be even more specific.

About Miss DRIVER

(see page 13)

Swimming, motorcycle riding, and crafts keep lovely Marjorie Stevens busy. She also enters an occasional beauty contest and currently is Miss Apple Valley, California. Marjorie intends to be a high school physical education teacher. She is a real believer in wearing safety belts because her father's life recently was saved by one.

Notice to SUBSCRIBERS

Paid subscriptions to DRIVER are handled by the Superintendent of Documents, Government Printing Office, Washington, DC 20402, as shown on our contents page. The editorial offices at Norton AFB, CA, have no control over service to subscribers. We have, however, taken the many complaints sent directly to DRIVER and passed them along to the Superintendent of Documents. We have now been assured that corrective action has been taken and that subscription service will be improved. DRIVER sincerely appreciates the fact that many readers find the magazine of sufficient value that they wish to buy a personal subscription, and we regret that service has been less than satisfactory.

Notice to OUR READERS

A fellow office worker stuck his head in our office today, saw the huge pile of letters on Alice's desk, and made the following comment: " . . . (expletive deleted), you mean you get **that** much mail each delivery!?"

Well, we've always been rather proud of receiving about 80 letters a month from our readers. It indicates you read the magazine, and care enough to write us your comments and ask questions. But instead of 80 letters a month, we are now getting about that many every two days, most of which request copies of the "Backyard Mechanic Reprint," per our announcement in the May 1974 issue.

We don't mind a bit, despite the increased workload. But you requesters could help us out a lot by heeding the following information when requesting copies of the "Backyard Mechanic" Reprint.

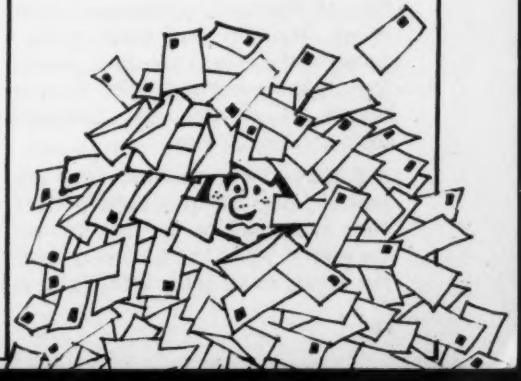
(1) Send your request on a postcard, or stamped and addressed 3x5 file card, and include the address to which you wish your copy mailed. (If you have other comments or questions, please send them in separately.)

(2) Do not cut the reprint announcement out of the magazine to send in as your request. This ruins DRIVER for the next guy down the line. (It's supposed to be passed around to 9 other service people besides yourself.)

(3) Limit your request to one copy only. Our supply is limited, and when it runs out we doubt if we can have more printed.

(4) Do not telephone your request.

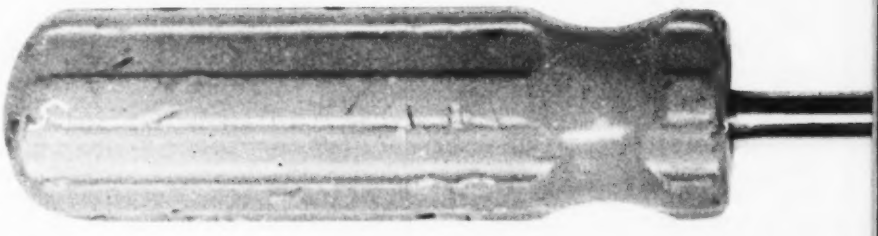
A small amount of DRIVER's mail was accidentally destroyed the second week in June. If you requested a copy of "Backyard Mechanic" before 11 June and have not yet received it, please send us another postcard with your name and address.



THE BACKYARD MECHANIC

The Backyard Mechanic is designed to serve as only a general guide to the maintenance topics discussed. Since basic procedures vary from car to car, a manual should be consulted when performing any maintenance. And any jobs that the "backyard mechanic" feels are beyond his capabilities should be left to experts.

GENERAL TUNEUP



Recently many people have gotten very tune conscious—not musically but mechanically. Fuel shortages and high gas prices make maximizing gas mileage the "in" thing. But many drivers still think there are super-trick ways of tuning a car to double the gas mileage.

Well, unfortunately there aren't any magic tricks or gadgets that will substantially increase fuel economy. The truth is that your car operates at best efficiency when it is tuned properly to specifications. So the real way to get maximum performance and gas mileage is to perform a thorough tuneup. But by "thorough" we mean more than just slapping in points and plugs—although this alone will usually improve performance.

A good tuneup can be broken down into three major steps that begin with an inspection of the basic systems, such as the fuel and electrical systems. Phase two is the actual tuneup step of replacing ignition parts. And the last step is making the ultra-important final settings and adjustments. We'll outline the basics of the first two steps here, and next month we'll cover the use of tuneup equipment for making the final adjustments.

GENERAL CHECKS

The first thing you should do before beginning a tuneup is glance through a manual to get a good idea of what you're going to do and what equipment and parts are needed. It's usually a good idea to pick up regularly replaced parts, such as filters, when they are on sale. But if you don't have replacement parts on hand, your best bet is waiting until you check things out before buying parts. This way you won't go out and pay for parts not really needed.

After checking a manual, the first step in a tuneup is a quick inspection of the basic components that affect reliability and performance. Some of the most important checks that require nothing more than a couple of minutes and common tools are listed below.

Battery—First, after removing any jewelry, pop off the battery filler caps and check to see that the water level is up to the fill line or over the plates in all cells. If the level is low, bring it up with distilled water. Tap water is okay in an emergency.

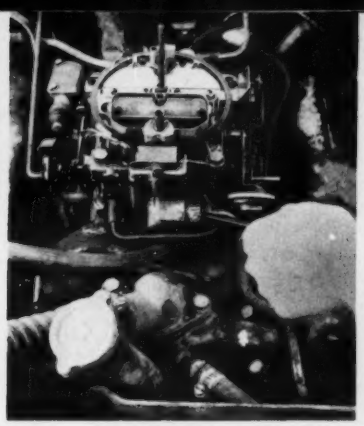
Next make sure the battery case and terminals are clean. Corroded terminals should be cleaned with steel wool or a special cleaning tool, such as pictured. When removing the battery cables for cleaning, be sure to remove the ground cable first (the cable that runs to the car frame or engine—the negative cable on nearly all American cars and most imports). Connect the ground last when reinstalling the cables. A dirty battery case can be washed with baking soda solution and rinsed with clean water. Coat the tops of the cleaned battery terminals with petroleum jelly to help prevent corrosion. Finally, trace the positive battery cable to make sure all electrical connections are tight—especially at the starter.

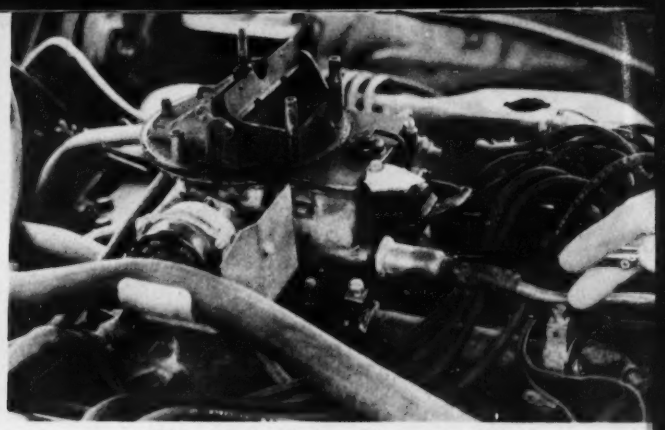
Air Filter—A dirty air filter restricts air flow to the carburetor and causes it to burn more gas. So, a clean air filter is essential for best gas mileage. Most cars use a disposable paper element filter that is available for around $3 at discount stores. You can check the filter by holding it up to the sunlight or to a bright light bulb. If you can't see light coming through all the way around the filter, it should definitely be replaced.

Gas Filter—A plugged gas filter can stall your engine cold without warning. Since there's no way to check the filter, it should be replaced at every tuneup. There are two basic types of gas filters—the type used on most GM products (Rochester carbs) installs inside the carb. Most other cars use an in-line filter that clamps in the fuel line between the fuel pump and the carb.

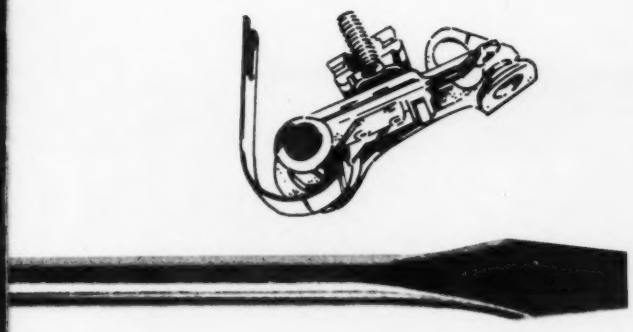
The GM-type filter can be replaced by very carefully removing the fuel line at the carb while holding a rag under the line connection to catch leaking gasoline. When you remove the line note how the filter and spring insert in the filter housing so you can install the new filter correctly.

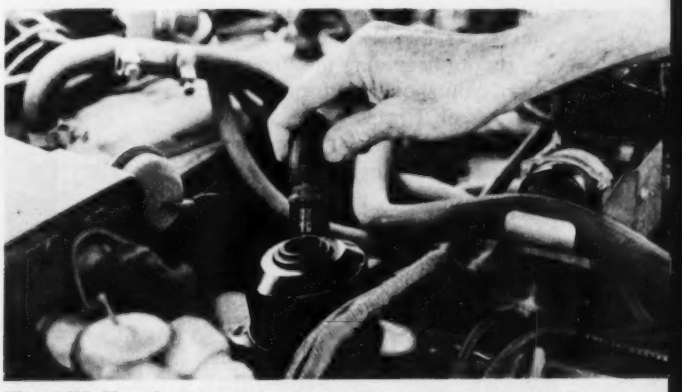
Special cleaning tool works best on corroded terminals.





The gas filter fits inside the carb on most GM products. In-line filters are used on nearly all other cars.





The PCV filter is located in the rocker arm cover or intake manifold on most cars and should be replaced at every tuneup.

The in-line filter either clamps into the fuel line or, on most Ford products, it screws into the carb with the fuel line clamped to the other end. The new filter can be clamped into place exactly as the old filter came out.

Emission Systems—Emission systems should be properly maintained to keep emissions down and performance up. The "Backyard Mechanic," Parts VII and VIII in the July and August DRIVERs, cover emission system checks. But during a tuneup your main concerns should be the PCV system and the heat riser and/or thermostatic air cleaner.

An easy way to check the PCV system is to place a sheet of paper over the oil filler neck. If the paper is pulled in by suction, the system is operating. Even if the system is operating this is the perfect time to install a new PCV valve—the valve should be replaced every 10,000 miles or so. To replace the valve simply locate it in the rocker arm cover or intake manifold. Pull the old valve out of its rubber grommet and insert the new valve being sure it is properly seated in the grommet.

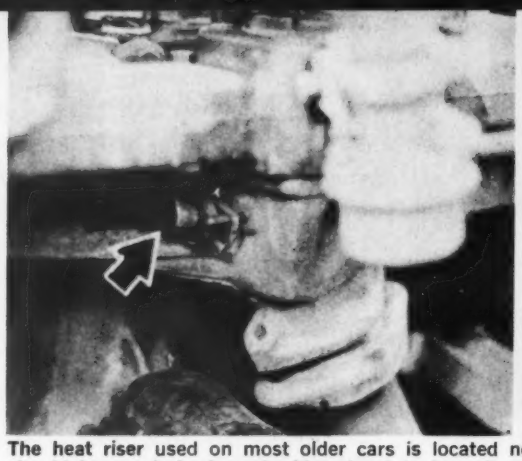
The heat riser is a simple valve that controls heating of the intake manifold by exhaust gases. If the valve sticks it causes all kinds of problems. Locate the heat riser on the exhaust pipe or crossover near the exhaust manifold and check it for free operation. A sticking valve can be freed with solvent.

Most cars since 1971 and many older model cars have a special thermostatically-controlled air cleaner instead of the heat riser. And a few cars still use both systems. If your car uses a thermo air cleaner there will be a hot air tube or pipe running from the exhaust manifold to the air cleaner intake. The previously mentioned "Backyard Mechanics" cover thermo air cleaner maintenance—but your primary concern should be checking to see that the heat tube is properly connected at the air cleaner and manifold and that it's not leaking.

Spark Plug Wires—Plug wires are very frequently neglected items that can cause plenty of problems. Wires with cracked or damaged insulation should be replaced. The best way to install new wires is to buy a replacement kit designed for your car's engine. These kits come with wires pre-cut to the proper size. The only trick is replacing one wire at a time so you get the wires into the distributor cap correctly. If the wires are oil soaked but not damaged they can be cleaned with solvent.

Clean Carb—At every tuneup, if not more frequently, a can of carb/combustion chamber cleaner should be sprayed down the carb throat according to the instructions on the can. The outside of the carb—especially the choke plate and linkages—should also be sprayed clean with carb or choke solvent. Be sure the choke operates freely.

continued



The heat riser used on most older cars is located near the exhaust manifold. It should be regularly doused with solvent to keep it operating freely. On cars with thermo air cleaners, make sure the heat tube or pipe is connected at the manifold and at the air cleaner.

TUNEUP

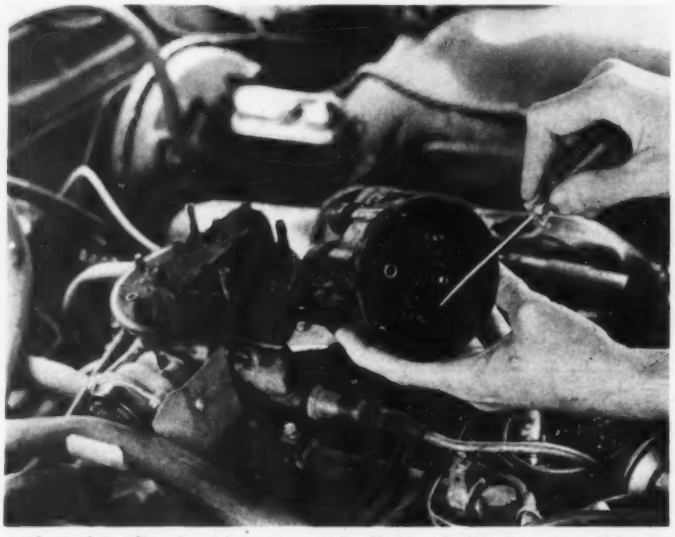
After checking out the mentioned items, as well as basics like the drive belts and the master cylinder reservoir, you're ready to get into the actual tuneup. The only tools you need in addition to ordinary hand tools are a plug gapping tool and feeler gauges—unless you have a GM product in which case you don't even need feeler gauges. Naturally you'll need spark plugs and a tuneup kit—these are discussed later.

Before beginning the tuneup, however, you should perform a compression check. Checking the compression tells you the internal condition of the engine—primarily what kind of shape the valves and piston rings are in. This check is important since an engine down on compression can't be very effectively tuned, and some engines can be damaged when run with burned valves.

In a future "Backyard Mechanic" we will feature an entire article on doing a thorough compression and cylinder balance test. But in the meantime, here is a very simple way to get a good idea of your engine's internal condition. Pull the coil wire out of the distributor and ground it to the firewall or engine. Then crank the engine over with the starter for about 20 seconds. If the engine cranks fairly evenly, the compression should be okay. But if there is a lot of variation in the cranking speed a complete compression check should be made.

PLUGS

After checking the compression, the first ignition parts you'll want to replace are the spark plugs. But before running out to buy new plugs, it's a good idea to remove a couple of the old plugs and examine them to see if the fuel mixture is burning properly. If you have a four- or six-cylinder engine, removing the plugs should be a snap with a plug wrench or spark plug socket and ratchet. But if you have a V-8 or air conditioning, some of the plugs may be tricky to get to. Make a survey under the hood to see if you need any kind of special extensions or swivel adapters to get to the plugs.

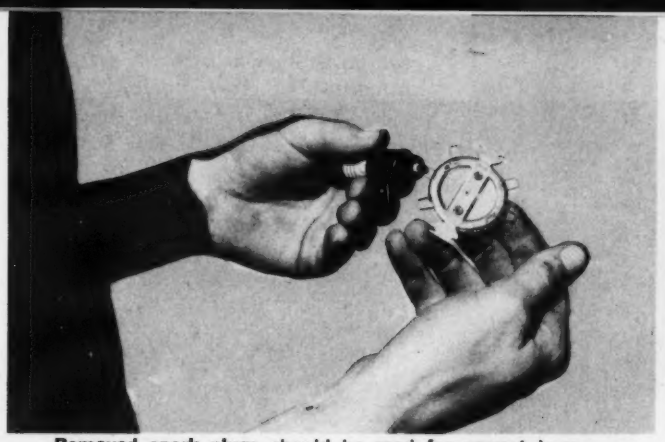


Light carbon deposits should be scraped off the distributor cap contacts. Heavy carbon build-up or cracks in the cap call for a new cap.

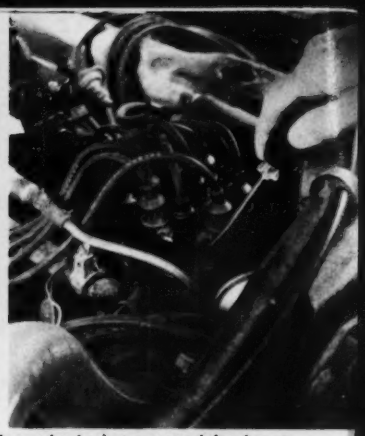
If you have compressed air available it's a good idea to blow out the plug depressions to keep junk from falling in the hole when the plug is removed. Pull off the wires on a couple of plugs and carefully remove the plugs. Since the removed plugs will be warm, grab them with a rag or leave them in the plug socket tool to inspect them. If the plugs have a crumbly chocolate-brown deposit, the engine is burning okay. But, if the plugs are black and oily, either the plug is burning too cold or oil is leaking into the combustion chambers and fouling the plugs—oil fouling is common with older engines that have worn piston rings. In either case a hotter burning plug should be used. On the other hand, a white powdery deposit means the engine is burning too hot and colder burning plugs are definitely needed.

A good place to buy new plugs is at a discount store. But check the application charts very carefully to get the correct plug for your engine. Frequently the same size engine uses a different plug, depending on the year or horsepower rating of the engine. If you're changing to a different heat range plug, be especially careful. If you have trouble determining what plug to switch to, take one of the old plugs to a parts house and have them set you up with the right plug.

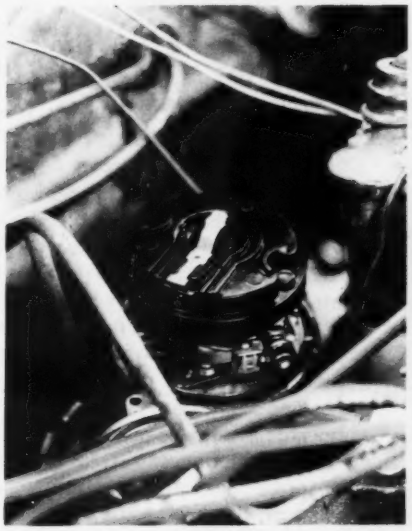
While picking up your plugs you can grab an ignition tuneup kit and you're set for your tuneup. The best way to go is with sealed kits that



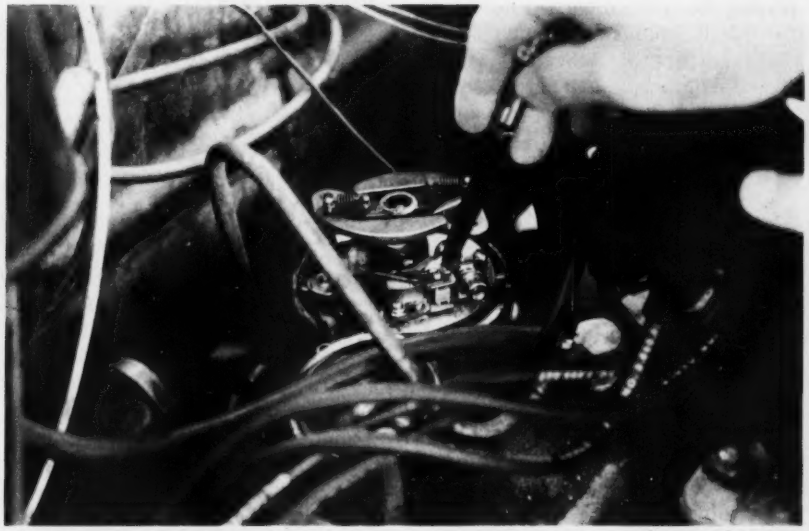
Removed spark plugs should be read for correct burn. New plugs should be gapped to specifications before installation.



The distributor cap on most GM products is removed by turning the special lock screws until they release. Non-GM cars have caps held in place by external clips that are popped off with a screwdriver.



GM distributor. Rotor



Condenser Points

contain a rotor, condenser, and points. Just be sure and get the correct kit for your car and engine. As with the plugs, the kits may differ for the same engine depending on the year or horsepower rating.

After figuring out how to remove all the plugs (if this is a problem on your engine) all you have to worry about is gapping the new plugs. Most plugs are pregapped at the factory, but double-check each plug with a gapping tool to be sure it's at the gap specified in your manual.

Replace the wire immediately on each new plug to prevent mix up. Install the plugs one at a time and snug

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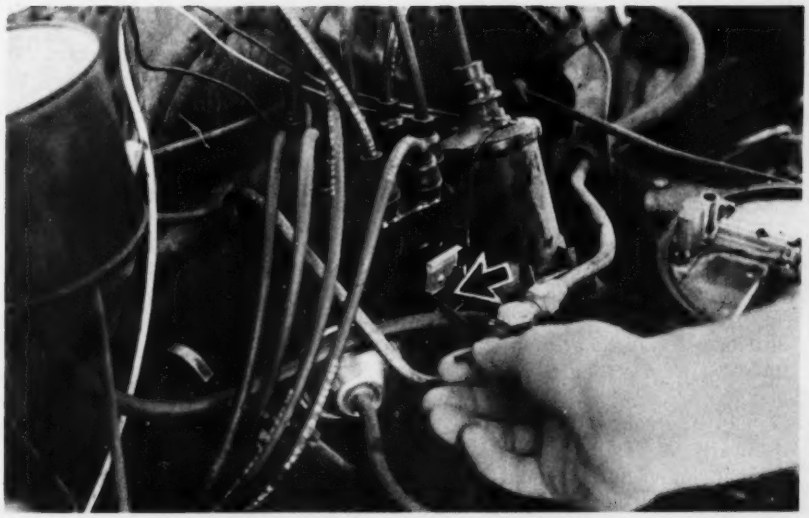


Adjusting access window on GM distributor.

them finger tight before tightening them with a socket or torque wrench.

POINTS

After changing all the plugs you're ready to get into the distributor. Installing new ignition points and condenser are the only tricky parts of a tuneup—but even this job is simple if you work carefully. While some people recommend removing the distributor to work on it—you can avoid a lot of potential problems by leaving it in place and simply being careful.

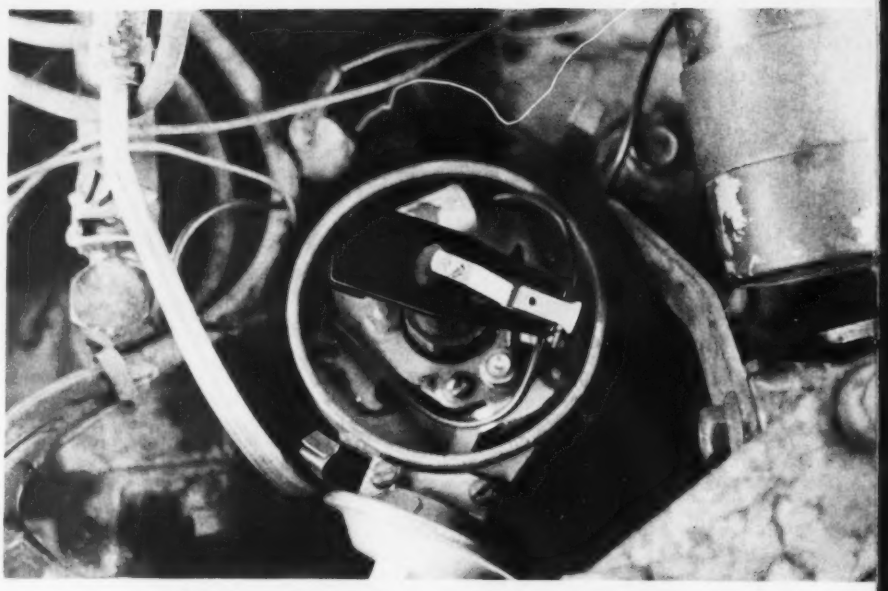
The most important thing when replacing the ignition parts is not losing the small hold-down screws—especially not dropping them down into the distribtuor. Magnetized screwdrivers are a big help for this job.

When you're ready to replace the points, the first thing you'll need to do is remove the distributor cap. Most GM cars have caps with a special locking catch. To remove this type cap, simply use a screwdriver and turn the screw heads in the cap until the locks release (see photo). Most other type caps are held in place by external clips that can be popped off with a screwdriver.

Check the removed cap very carefully for cracks or excessive carbon deposits on the inside contacts. If either are found, a new cap should be installed. When installing the new cap make an accurate drawing of where the plug wires fit into the cap so you can install the new wires properly. If the wires do get crossed and the engine won't start or runs poorly, a service manual has a diagram of how the wires fit into the cap.

If the distributor cap is in good condition, gently scrape any carbon off the contacts with a screwdriver and spray out the inside of the cap with solvent. Wipe the cap clean with a rag and pull it out of your way.

There are basically two types of distributors and the procedure for installing and adjusting the points differs. We'll discuss the two types separately, beginning with the type used on nearly all GM products. The accompanying pictures should get you oriented if you've never replaced ignition parts.



Non-GM distributor. Rotor Points Condenser Note where wires connect.

GM DISTRIBUTORS

On a GM-type distribtuor the first thing you'll see with the distributor cap removed is a large round rotor held in place by two screws. Loosen the screws and lift the rotor straight up to remove it. Now the points and condenser should be visible (see photo), unless you have a window radio antenna in which case there will be a shield over the points that you simply pull off. Now you can see that the points and condenser are held in place by set screws. Also notice that there are two wires that attach to the points. Generally the wires fit in a clip and can be simply pulled loose. However, on some cars the wires are held in place by a small nut—you may need a small ignition wrench to loosen this nut. After removing the wires from the points, very carefully loosen the condenser, then the points by removing the hold-down screws. Lift the parts off the plate.

Spray the distributor plate with solvent and gently wipe it and the distributor cam clean. Then take the small tube of lubricant supplied with the tuneup kit and coat the cam with lube. Now you're ready to install the new condenser and points. Place the new condenser on the plate exactly as the old part came off and lock it down with the screw. Then place the points on the plate, being very sure the guide hole on the points is positioned over the guide post. Tighten down the screw and hook the wires to the points. Since the point adjustment is made externally with a GM-type distributor, you can put in the new rotor and lock down the distributor cap. Now you're ready to fire up the engine and adjust the points.

Locate the adjusting access window on the distributor cap (see photo) and insert the allen wrench that comes with the tuneup kit. If the engine fails to start, turn the wrench one way, then the other until the engine fires. If the engine still fails to start, go back and doublecheck your work.

To adjust the points, with the engine running turn the adjusting wrench to the right (clockwise) until the engine starts to miss or dies. Then simply turn the wrench one-half turn back to the left. This should be the correct point gap setting. But the setting should also be checked with a dwell meter—this procedure will be covered next month.

OTHER TYPE DISTRIBUTORS

Installing and adjusting points on the other type distributor used on nearly all non-GM cars and on most import cars is basically the same except for the point adjustment. The accompanying pictures should clarify

the steps involved in working on this type distributor. With the distributor cap removed, the first thing you need to do is remove the rotor by pulling up on it. Then the condenser which may mount on the distributor plate or on the outside of the distributor housing can be removed. Next remove the points by loosening the screw and lifting the unit off. Clean the distributor plate and cam, then lube the cam as with the GM distributor. Install the new condenser and you're ready for the points. This is where the basic procedure differs.

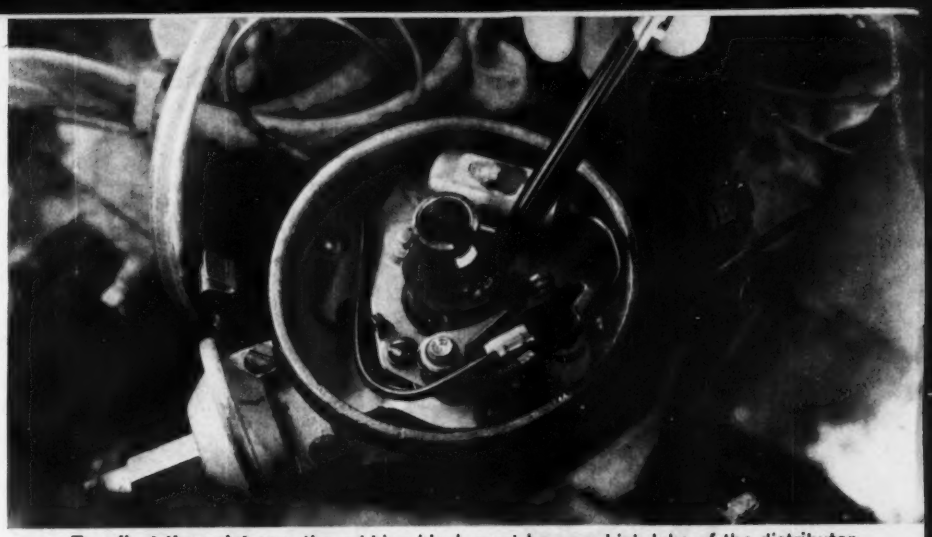
Put the points in place, making sure the guide hole is over the guide post, and snug down the set screw. Don't tighten it all the way because you still have to adjust the points.

To adjust the points, you have to first get the point rubbing block on a lobe of the distributor cam (see photo). To do this, turn the engine by hand with the fan, or if your car has a clutch-operated fan you can have a buddy tap the starter until the rubbing block is on the peak of a cam lobe and the points are open.

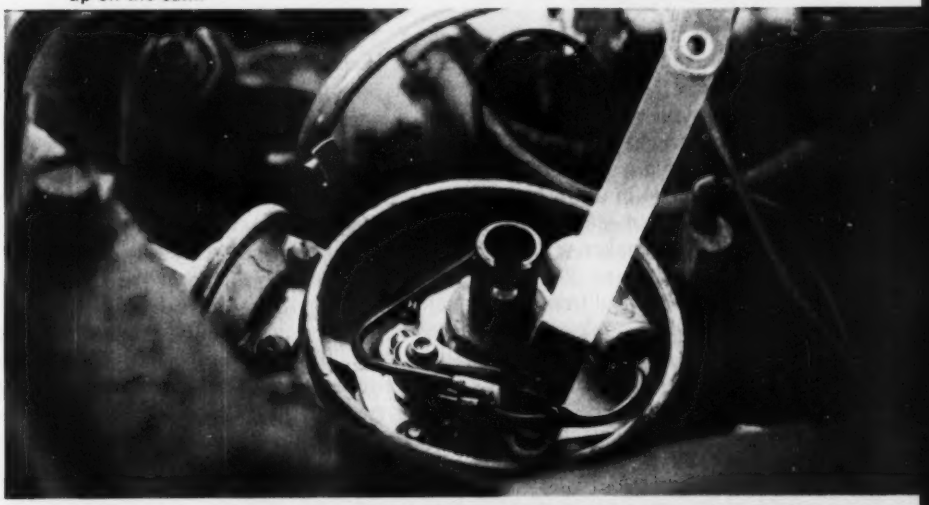
Now with the points held open by the cam, carefully insert a clean feeler gauge of the correct size (your manual gives the gap spec) in between the points. Insert a screwdriver in the special adjusting slots (see photo) and adjust the gap until the gauge drags lightly when inserted in the gap. Then carefully tighten the set screw and double-check the gap. The gap frequently changes when the screw is tightened. Install the new rotor by lining up the guide inside the rotor with the groove on the cam and twist the rotor slightly unil it slides all the way down on the cam. Re-install the distributor cap and you should be all set.

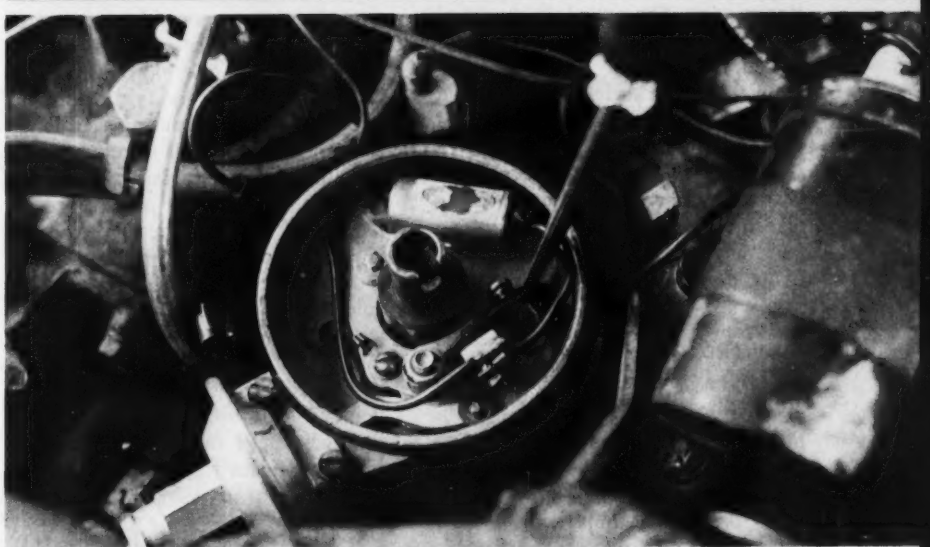
The engine should fire up. If not, go back and check your work—especially the point gap. If it's too narrow or too wide, the engine won't start. The points should also be checked with a dwell meter. As previously mentioned, this will be covered next month.

Now your car should run a whole lot better. But you're not finished yet. The final settings of point dwell, timing, and carburetion are what make the difference between a car that runs and one that runs great. So hang on 'til next month when we'll give you tips on super-tuning.



To adjust the point gap, the rubbing block must be on a high lobe of the distributor cam. Special rings that fit over the cam and hold the points open to the proper gap are available. These save the trouble of cranking the engine to get the rubbing block up on the cam.





With the points held open by the cam, the gap can be adjusted to specifications with a feeler gauge. The gap is changed by inserting a screwdriver in the special adjustment slot.

LETTERS TO THE EDITOR

BACKFIRE

Address your letters to:
Editor
DRIVER Magazine
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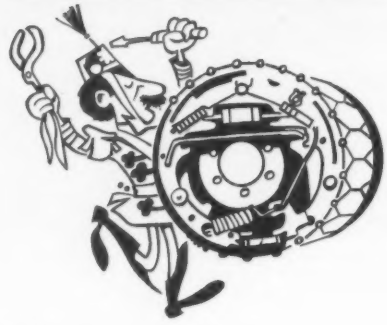


DRUM BRAKE ARTICLE

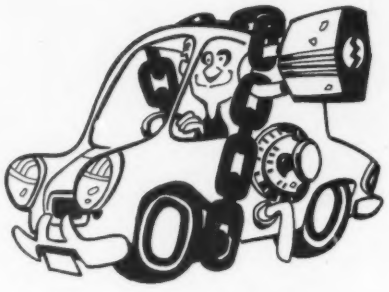
In reference to the drum brake article in the March '74 DRIVER; (1) if the American-type rear drums are used no amount of wheel puller will get the drum off. Usually a healthy shot of penetrating oil will do more good because nine out of ten times rust will be the trouble-maker. (2) The top left photo on page 24 shows the spring pliers reversed from the correct usage. The large hook end should be piercing the lining so it will not slip and mash a finger or knuckle. (3) Wheel cylinders are of an expanding type and when replacing shoes the cups are forced toward each other and into an area of rust and other foreign matter. The cylinders should always be rebuilt or, better yet, replaced.

Overall, your article leaves a lot to be desired considering the high quality of the publication . . .

Brakes are what stop a vehicle and if you're not sure what you are doing, take the job to the hobby shop to get help, or to a mechanic who makes his living doing this type of work.

SSgt Thomas J. Hill
Box 97
Fortuna ND 58844

We agree with your points. The article was intended as an overview of the job, and you'll notice we emphasize several times studying a manual. In past issues we have also stressed using the hobby shop or going to a good mechanic when unsure of a repair job.



ON LOCKING CAR DOORS

In response to a letter from Lt Col M. Grant, USA, in the April issue concerning the locking of car doors, I would like to offer the following. Over a number of years a continuing study of fatal accidents (originally designed to assess the value of safety belts) was undertaken by Drs. P. Gikas and F. Huelke of the University of Michigan Medical School. They found that, basically, the majority of fatalities occurred when a person was thrown out of the car (thereby supporting the use of seat belts), and one of the ways that occurred was when an unlocked door opened as the car rolled over, the latch being activated from the outside on contact with the ground. In addition to mortality, there was morbidity associated with an opening door in the form of injury, including amputation, of limbs even though seat belts were worn. On the other side, there was no evidence to indicate that the presence of a locked door impeded rescue efforts in any significant way. This latter seems to be supported by the experiences of emergency medical services with which I have been associated, who find that, if there is difficulty in opening a door, it is because it has been jammed shut by frame distortion in the accident. I hope that this information will quell some fears and underscore the advisability of locking car doors.

Lt Hans P. E. Sachse, M.D.
USS Durham (LKA-114)
FPO San Francisco 96601

ENGINE WASHING TIP

Many thanks for producing a great magazine. I think the articles are excellent, and especially like the many tips found in "Backfire." In reference to the information about engine washing in the March '74 issue, you didn't mention covering the alternator. It should be wrapped or covered before washing the engine to prevent shorts or rust spots which can lead to expensive repair. I know 'cause I've been there. Keep those motor tips coming!

SSgt H. J. Neal
HQ 12AF/DP
Bergstrom AFB TX 78743

"WHEN I WAS TWENTY-ONE . . . "

I think I object to the little cartoons used to illustrate your April '74 article entitled "An Insurance Primer."

I graduated from high school in 1963 at age 17. At that time the high-risk group was the 16-21 bracket. When I reached 21 the insurance companies raised the rates for those aged 21-25 When I was 25 the high-risk group had become 16-30. Now I am 28 and wondering what will happen when I reach 30!

I have had Drivers Ed, have never had an accident, never had a moving violation, and have always driven smaller cars. Obviously my peer group is composed of poor risks and/or lousy drivers, or there is something wrong with the way this country handles insurance and driving and cars.

So, it is not really a good record or age that matters. It is time we all woke up and got busy (1) improving the vehicles, (2) improving the way the insurance companies approach the problem, and most importantly, (3) immediately start changing our attitude toward driving, and training drivers.

When we the public decide that human lives are more important than inconvenience (as in not using a seat belt because it becomes inconvenient to reach the glove compartment), and we decide the driver's training and safety devices are worth the extra cost, then the legislators and manufacturers will do their part. Then we can get at the insurance rates.

Your magazine is a big step in the right direction, and I think it is well done. Keep up the good work . . .

QM3 Leif Jenkinson

USCG 400-655
USCG Base Ketchikan
Ketchikan AK 99901

NAVY FRIEND

Of all the Navy/DOD periodicals that pass through my IN/OUT baskets each month, DRIVER is by far the finest. It is the ONLY one that commands my attention from cover to cover. The format, style of writing, and interesting subject matter obviously are carefully thought out to insure that your magazine is read and not just initialed and passed on as are most others of this type. You should conduct some training sessions for editors of other military publications.

Keep up the good work!

Capt D. Mason Wells, USN
Commander Amphibious Squadron Six
Amphibious Force, U.S. Atlantic Fleet

Thank you, Captain, for your most generous appraisal of our efforts. Letters such as yours make all the hard work and endless problems of putting out a monthly magazine extremely worthwhile.

MORE SUBSCRIPTION COMPLAINTS

This May I received the January issue of DRIVER on subscription. I do not have any winter driving to do in Texas in May and can get the same issue out of the trash four months sooner. Because of the unsatisfactory service, I feel the $5.25 subscription cost was a waste of money and would rather have it refunded.

Mr. Bob W. Baker

7215 Whispering Winds
Austin TX 78745

The agency responsible for DRIVER subscriptions is the Government Printing Office, Washington, DC 20402. We've done all we can at this end to have them rectify the deplorable subscription problem, including sending copies of the many complaint letters mis-directed to DRIVER. But the situation persists, and we are sorry, and agree you should request and receive a refund.

"RETURN TO CAPE MAY"

I have been reading your magazine for some time now and have enjoyed it thoroughly. It is one of the most interesting magazines I have read. Please keep up the good work.

I would like to bring to your attention a problem I am having concerning receipt of each issue. During the first part of last week (25 March) I received the December '73 issue, then during the latter part of the same week I received the November '73 issue. I know others who have already received their February '74 issue. What gives?

Because of late receipt of the December magazine, I am only now writing you about "Return to Cape May." Is it possible for civilians like myself to benefit from this type of schooling? Would it be beneficial if we worked at a government installation? I feel that all drivers should have this kind of education to enable us to cope with the already overburdened highways (and sidewalks). Please advise me of what action is necessary to take the course.

Mr. Nicholas P. Marasco

5A6 Arbor Green
Beverly NJ 08010

Regarding the Cape May Driver Improvement Course discussed in "Return to Cape May," yes, it could be of tremendous value to ***any*** *driver who participated in this unusually effective training. It is an eye-opener, and really shakes a person out of his complacency with regard to driving. The reward a driver reaps from this behind-the-wheel course is the life-saving ability to avoid or recover from a number of potentially deadly emergency situations. After taking the course the driver emerges much better equipped to survive on the highway. It's the kind of training we* ***all*** *should take.*

American University is under contract to the Coast Guard to provide the driver's training at Cape May. I understand the New Jersey Highway Patrol is sending its drivers through the course, so it is possible a civilian or group of civilians could make similar arrangements to attend the course.

The man who has this information is Mr. Ed Cook, Driver's Training, Coast Guard Station, Cape May, New Jersey 08204.

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TUNEUP

pet peeve

My "PET PEEVE" is the driver who tries to get through the periods of dawn and dusk using parking lights. He's the same clown who thinks he needs to use lights only to see the road.

Commander I. M. Zeman
Commanding Officer
Naval and Marine Corps Reserve Training Center
Fields Point, Providence, Rhode Island 02905